LIMITS OF WIDTHS OF BRIDGE SUPERSTRUCTURES

Consideration should be given to keeping bridge superstructures in units not exceeding 60 to 80 feet in width. Longitudinal expansion joints should be placed in medians and other similar locations where differential movements at the joints will not be objectionable. Joints in the traveled way should be avoided. Joints should be detailed so that each unit can be built and act independently of other units, until they are joined.

As a general rule, a very wide superstructure designed and built as two or more independent units will have economic and structural advantages over a single large unit.

Suitable provisions shall be made in the design and details of wide structures to provide for transverse temperature and shrinkage movements.

When a bridge more than 80 feet wide is to be built as a single integral unit, contractors are often interested in constructing approximately half the width, removing the falsework and reusing it for constructing the remaining width. This procedure presents problems in differential deflections and is of concern to contractors when preparing their bids. The plans and/or specifications should make it very clear whether or not such a procedure will be permitted. If such a procedure is permitted, suitable details for closure pours, joints in bents and abutments and sequence of operations should be given on the plans.

When a wide structure consists of two or more independent units, consideration should be given to drainage across the joint.

Philip C Warriner

Guy D. Mancarti

FLM:jgf

Supersedes Memo to Designers 21-35 dated April 1, 1966

21-35 LIMITS OF WIDTHS OF BRIDGE SUPERSTRUCTURES

Consideration should be given to keeping bridge superstructures in units not exceeding 18 to 25 meters in width. Longitudinal expansion joints should be placed in medians and other similar locations where differential movements at the joints will not be objectionable. Joints in the traveled way should be avoided. Joints should be detailed so that each unit can be built and act independently of other units, until they are joined.

As a general rule, a very wide superstructure designed and built as two or more independent units will have economic and structural advantages over a single large unit.

Suitable provisions shall be made in the design and details of wide structures to provide for transverse temperature and shrinkage movements.

When a bridge more than 25 meters wide is to be built as a single integral unit, contractors are often interested in constructing approximately half the width, removing the falsework and reusing it for constructing the remaining width. This procedure presents problems in differential deflections and is of concern to contractors when preparing their bids. The plans and/or specifications should make it very clear whether or not such a procedure will be permitted. If such a procedure is permitted, suitable details for closure pours, joints in bents and abutments and sequence of operations should be given on the plans.

When a wide structure consists of two or more independent units, consideration should be given to drainage across the joint.

Richard D. Land

Shannon H. Post

RDL:jgf/jlw

Memo converted to metric.